

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-52 (Canceled).

Claim 53 (Currently Amended): A single chain class II MHC molecule comprising:
a peptide-binding groove and
covalently linked in sequence: 1) a class II β chain, 2) a single chain linker, and 3) a class II α chain,
wherein the chain of both 1) and 3) lack a transmembrane domain; and further wherein the single chain class II MHC molecule is empty.

Claim 54 (Previously Presented): The MHC molecule of claim 53, wherein the MHC molecule is soluble.

Claim 55 (Previously Presented): The MHC molecule of claim 53, wherein the chain of 1) comprises a $\beta 1$ domain and the chain of 3) comprises an $\alpha 1$ domain.

Claim 56 (Canceled).

Claim 57 (Previously Presented): The MHC molecule of claim 53, wherein the single chain linker is linked between the carboxyl terminus of the β chain and the amino terminus of the α chain.

Claim 58 (Previously Presented): The MHC molecule of claim 53, wherein the β and α chains are each independently selected from the group consisting of IE, IA, DR, DQ and DP proteins.

Claim 59 (Canceled):

Claim 60 (Previously Presented): The MHC molecule of claim 53 wherein the MHC molecule is modified to carry a detectable tag.

Claim 61 (Previously Presented): A multivalent MHC complex comprising two or more linked MHC molecules of claim 53.

Claim 62 (Previously Presented): A MHC complex of claim 61 wherein the MHC molecules are linked to immunoglobulin domains.

Claim 63 (Previously Presented): A MHC complex of claim 61 wherein the MHC complex is modified to carry a detectable tag.

Claims 64-65 (Canceled).

Claim 66 (Previously Presented): A single chain MHC class II-peptide complex comprising:
a peptide-binding groove;
covalently linked in sequence: 1) a class II β chain, 2) a single chain linker, and 3) a class II α chain, wherein the chain of both 1) and 3) lack a transmembrane domain; and
a presenting peptide being covalently linked to the MHC molecule and non-covalently bound to the peptide binding groove of the MHC molecule.

Claim 67 (Previously Presented): The MHC complex of claim 66, wherein the complex is soluble.

Claim 68 (Previously Presented): The MHC complex of claim 66, wherein the chains of 1) and 3) comprise a $\beta 1$ domain and $\alpha 1$ domain, respectively.

Claim 69 (Previously Presented): The MHC complex of claim 66, wherein the MHC class II molecule comprises the presenting peptide covalently linked to the β chain.

Claim 70 (Canceled).

Claim 71 (Previously Presented): The MHC complex of claim 66, wherein a presenting peptide linker sequence is interposed between the presenting peptide and the MHC molecule.

Claim 72 (Previously Presented): The MHC complex of claim 66, wherein the β and α chains are each independently selected from the group consisting of IE, IA, DR, DQ and DP proteins.

Claim 73 (Previously Presented): The MHC complex of claim 66, wherein the MHC molecule is modified to carry a detectable tag.

Claim 74 (Previously Presented): A multivalent MHC complex comprising two or more linked MHC molecules of claim 66.

Claim 75 (Previously Presented): The MHC complex of claim 74, wherein the MHC molecules are linked to immunoglobulin domains.

Claim 76 (Previously Presented): The MHC complex of claim 74, wherein the MHC complex is modified to carry a detectable tag.

Claims 77-87 (Canceled).

Claim 88 (New) A loaded single chain MHC class II-peptide complex comprising:
a peptide-binding groove;

covalently linked in sequence: 1) a class II β chain, 2) a single chain linker, and 3) a class II α chain, wherein the chain of both 1) and 3) lack a transmembrane domain; and a presenting peptide being non-covalently linked to the MHC molecule and non-covalently bound to the peptide binding groove of the MHC molecule, wherein the loaded single chain MHC class II-peptide complex can be recognized by a CD4+ T cell.

Claim 89 (New): The MHC complex of claim 88, wherein the MHC molecule is soluble.

Claim 90 (New): The MHC complex of claim 88, wherein the chain of 1) comprises a $\beta 1$ domain and the chain of 3) comprises an $\alpha 1$ domain.

Claim 91 (New): The MHC complex of claim 88, wherein the single chain linker is linked between the carboxyl terminus of the β chain and the amino terminus of the α chain.

Claim 92 (New): The MHC complex of claim 88, wherein the β and α chains are each independently selected from the group consisting of IE, IA, DR, DQ and DP proteins.

Claim 93 (New): The MHC complex of claim 88 wherein the MHC molecule is modified to carry a detectable tag.

Claim 94 (New): A multivalent MHC complex comprising two or more linked MHC complexes of claim 88.

Claim 95 (New): The multivalent MHC complex of claim 94 wherein the MHC complexes are linked to immunoglobulin domains.

Claim 96 (New): A multivalent MHC complex of claim 94 wherein the MHC complex is modified to carry a detectable tag.